

IN THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

1. (original) A heart valve assembly comprising:

a base member generally defining a plane and comprising a multi-lobular annular shape within the plane;

an annular body comprising a multi-lobular shape complementary to the multi-lobular shape of the base member; and

cooperating connectors on the base member and the annular body for connecting the annular body to the base member.

2. (original) The assembly of claim 1, wherein the cooperating connectors comprise first and second connectors on the base member and the annular body, respectively.

3. (withdrawn) The assembly of claim 2, wherein the first connector extends substantially continuously along a perimeter of the base member.

4. (original) The assembly of claim 2, wherein the first connector comprises a plurality of connector elements spaced apart along a perimeter of the base member.

5. (original) The assembly of claim 2, wherein one of the first and second connectors comprises a protrusion, and wherein the other of the first and second connectors comprises an aperture for receiving the protrusion therein.

6. (original) The assembly of claim 5, wherein the protrusion is resilient.
7. (original) The assembly of claim 5, wherein the aperture comprises at least one of a port, pocket, cavity, and hole.
8. (original) The assembly of claim 1, wherein the base member comprises a rigid base and a flexible cuff for attaching the base to a biological annulus.
9. (original) The assembly of claim 1, wherein the annular body comprises a connecting member for connecting a valve member to the base member.
10. (original) The assembly of claim 1, wherein the annular body comprises a valve member.
11. (original) A heart valve assembly, comprising:
a base member generally defining a plane and a longitudinal axis substantially orthogonal to the plane, the base member comprising a multi-lobular annular shape within the plane;
an annular body comprising a multi-lobular shape complementary to the multi-lobular shape of the base member, and
guides on at least one of the base member and the annular body for aligning the multi-lobular shapes with one another about the longitudinal axis.

12. (original) The assembly of claim 11, further comprising cooperating connectors on the base member and the annular body for attaching the annular body to the base member.

13. (original) The assembly of claim 11, wherein the base member comprises a rigid base and a flexible cuff for attaching the base to a biological annulus.

14. (original) The assembly of claim 11, wherein the annular body comprises a connecting member for connecting a valve member to the base member.

15. (original) The assembly of claim 11, wherein the annular body comprises a valve member.

16. (original) The assembly of claim 11, wherein the guides comprise visual markers on the annular body and the base member that may align within one another when the multi-lobular shape of the annular body is aligned with the multi-lobular shape of the base member.

17. (original) The assembly of claim 11, wherein the guides comprise tactile markers on the annular body and the base member that may interact with one another when the

multi-lobular shape of the annular body is aligned with the multi-lobular shape of the base member.

18. (original) The assembly of claim 11, wherein the guides comprise one or more tethers extending from the base member and through the annular body such that the annular body is slidable along the tethers to align the annular body with the base member as the annular body is directed towards the base member.

19. (original) The assembly of claim 18, wherein the one or more tethers comprise ratchets spaced apart along a portion of the one or more tethers, thereby providing at least one of a tactile indication and an audible indication as the annular body is directed towards the base member.

20. (original) The assembly of claim 19, wherein each of the tethers extends through a guide channel in the annular body, the ratchet elements engaging the guide channel to allow the annular body to be directed towards the base element but preventing the annular body from being directed away from the base member.

21. (original) The assembly of claim 18, wherein the one or more tethers are attached to the base member.

22. (original) The assembly of claim 21, wherein the one or more tethers are detachable from the base member.

23-35. (canceled)

36. (new) A heart valve assembly, comprising:
a base member comprising a generally annular shaped body and a flexible cuff extending around a periphery of the annular shaped body;
a valve member comprising a multi-lobular shape; and
one or more elongate guide members extending from the base member and receivable through the valve member such that the valve member is slidable along the one or more guide members to align the valve member with the base member as the valve member is directed towards the base member.

37. (new) The assembly of claim 36, wherein the valve member comprises a frame having a multi-lobular shape and a plurality of leaflets.

38. (new) The assembly of claim 36, wherein the flexible cuff extends radially from the annular shaped body.

39. (new) The assembly of claim 36, wherein the base member defines a plane and a longitudinal axis substantially orthogonal to the plane, the base member comprising a multi-

lobular annular shape within the plane, and wherein the multi-lobular shape of the valve member is complementary to the multi-lobular shape of the base member.

40. (new) The assembly of claim 39, further comprising one or more additional guides on at least one of the base member and the annular body for aligning the multi-lobular shapes with one another about the longitudinal axis.

41. (new) The assembly of claim 36, further comprising cooperating connectors for securing the valve member adjacent the base member.

42. (new) The assembly of claim 41, wherein the cooperating connectors comprise one or more ratcheting elements on each of the one or more guide members, thereby providing at least one of a tactile indication and an audible indication as the valve member is directed towards the base member.

43. (new) The assembly of claim 41, wherein the cooperating connectors comprise one or more elements on each of the one or more guide members for engaging the valve member to allow the valve member to be directed towards the base member but preventing the valve member from being directed away from the base member.

44. (new) The assembly of claim 36, wherein the valve member comprises one or more guide channels for receiving a respective one of the one or more guide members therethrough.

45. (new and withdrawn) The assembly of claim 44, wherein each guide channel comprises a piece of material attached to the valve member.

46. (new) The assembly of claim 44, wherein each guide channel comprises a recess in the valve member.

47. (new) The assembly of claim 46, wherein each guide channel further comprises a cover extending across at least a portion of the recess.

48. (new) The assembly of claim 36, wherein the one or more guide members comprise a rectangular cross-section.

49. (new) The assembly of claim 36, wherein the one or more guide members are detachable from the base member.

50. (new) The assembly of claim 36, each of the one or more guide members comprising one or more elements spaced a predetermined distance apart from the base member, each element comprising sloping proximal surfaces and blunt distal surfaces, allowing the valve

member to be directed down the guide members until disposed the predetermined distance from the base member, but preventing the valve member from subsequently being directed away from the base member.

51. (new) The assembly of claim 50, wherein the one or more elements comprise one or more detents.

52. (new) A heart valve assembly, comprising:

a base member comprising a generally annular shaped body, the base member comprising an annular ring and a flexible cuff extending around a periphery of the annular ring;

a valve member comprising a multi-lobular shape;

a plurality of elongate guide members spaced apart around a periphery of the base member;

a plurality of guide channels in the valve member for receiving respective guide members therethrough such that the valve member is slidable along the guide members to align the valve member with the base member as the valve member is directed towards the base member; and cooperating connectors for securing the valve member adjacent the base member.

53. (new) The assembly of claim 52, wherein the cooperating connectors comprise guide channels on the valve member and connectors on the guide members for engaging the guide channels for securing the valve member adjacent the base member.

54. (new) The assembly of claim 52, wherein the base member comprises a multi-lobular shape, and wherein the guide members extend from respective lobes of the base member.

55. (new) The assembly of claim 52, the guide members being detachable from the base member.